

Notice of References CitedApplication/Control No.
09/591,177Applicant(s)/Patent Under
Reexamination
BEAUDOIN ET AL.Examiner
Bradley L. SissonArt Unit
1634

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U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,312,662 B1	11-2001	Erion et al.	424/9.1
	B	US-			
	C	US-			
	D	US-			
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FOREIGN PATENT DOCUMENTS

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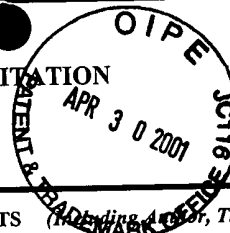
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INFORMATION DISCLOSURE CITATION

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Docket Number (Optional) 850865.90015	Application Number 09/591,177
Applicant(s) A.L. BEAUDOIN et al.	
Filing Date June 9, 2000	Group Art Unit 1634

*EXAMINER INITIAL	OTHER DOCUMENTS (Indicate Author, Title, Date, Pertinent Pages, Etc.)
3.	Su, C., Bevan, J.A., and Burnstock, G. [3H] adenosine triphosphate: release during stimulation of enteric nerves. Science 173(994): 336-338, 1971.
4.	Langer, S.Z., and Pinto, J.E.B. Possible involvement of a transmitter different from norepinephrine in the residual responses to nerves stimulation of the cat nictitating membrane after pretreatment with reserpine. J. Pharmacol. Exp. Ther. 196(3): 697-713, 1976.
5.	Burnstock, G. Purinergic receptors. J. Theor. Biol. 62 (2): 491-503, 1976.
6.	Von Kugelgen, I., and Starke, K. Noradrenaline-ATP co-transmission in the sympathetic nervous system. Trends Pharmacol. Sci. 12(9): 319-324, 1991.
7.	Westfall, D.P., Sedaa, K.O., Shinozuka, K., Bjun, R.A., and Buxton, I.L. ATP as a Cotransmitter Ann. NY Acad. Sci. 603: 300-310, 1990.
8.	Burnstock, G. Neural nomenclature. Nature 229(5282): 282-283, 1971.
9.	Burnstock, G. A basis for distinguishing two types of purinergic receptors. In: Cell membrane receptors for drugs and hormones: A multidisciplinary approach. (Eds. R.W. Straub and L. Bolis), Raven press, New York. Pp. 108-118, 1978.
10.	Fredholm, B.B., Abbracchio, M.P., Burnstosk, G., Daly, J.W., Harden, T.K., Jacobson, K.A., Leff, P., and Williams, M. Nomenclature and classification of purinoceptors. Pharmacol. Rev. 46(2): 143-156, 1994.
11.	Juul, B., Plesner, L., and Aalkjaer, C. Effects of ATP and related nucleotides on the tone of isolated rat mesenteric resistance arteries. J. Pharmacol. Exp. Therap. 264: 1234-1240, 1993.
12.	Motte, S.; Commun, D.; Piroton, S.; Boeynaems, J.M. Involvement of multiple receptors in the actions of extracellular ATP: the example of vascular endothelial cells. Int. J. Biochem. Cell Biol. 27: 1-7, 1995.
13.	Rongen, G.A., Floras, J.S., Lender, J.W.M, Thier, T., and Smits, P. Cardiovascular pharmacology of purines. Clin. Sci. 92: 13-24, 1997.
14.	Dubyak, G.R., and El Moatassim, C. Signal transduction via P2-purinergic receptors for extracellular ATP and other nucleotides. Am. J. Physiol. 265: C577-C606, 1993.

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EXAMINER <i>B. J. Simon</i>	DATE CONSIDERED 6-17-02
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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION

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Docket Number (Optional)

850865.9001

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June 9, 2000

Group Art Unit

1634

*EXAMINER
INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Johnson, C.R., and Hourani, S.M. Contractile effects of uridine 5'-triphosphate in the rat duodenum. Br. J. Pharmacol. 113(4): 1191-1196, 1994.

Pennanen, M.F., Bass, B.L., Dziki, A.J., and Harmon, J.W. Adenosine differential effect on blood flow to suregions of the upper gastrointestinal tract. J. Surg. Res. 56(5): 461-465, 1994.

Strohmeier, G.R., Reppert, S.M., Lencer, W.I., and Madana, J.L. The A2b adenosine receptor mediated cAMP responses to adenosine receptor agonists in human intestinal epithelia. J.Biol. Chem. 270(5): 2387-2394, 1995.

Hancock, D.L., and Coupar, I.M. Functional characterization of the adenosine receptor mediating inhibition of peristalsis in the rat jejunum. Br. J. Pharmacol 115(5):739-744, 1995.

Sarna, S.K. Gastrointestinal longitudinal muscle contractions. Am. J. Physiol. 265(1pt1): G156-G164, 1993.

Baricordi, O.R., Ferrari, D., Melchiorri, L., Chiozzi, P., Hamann, S., Chai, E., Rubini, M., and Di Virgilio, F. An ATP-activated channel is involved in mitogenic stimulation of human T lymphocytes. Blood 87(2): 682-690, 1996.

Di Virgilio, F. The P2Z purinoceptor: an intriguing role in immunity, inflammation and cell death. Immunol. Today 16(11): 525-528, 1995.

Ventura, M.A., and Thomopoulos, P. ADP and ATP activate distinct signaling pathways in human promonocytic U-937 cells differentiated with 1,25-dihydroxy-vitamin D3. Mol. Pharmacol 47: 104-114, 1995.

Biffen, M., and Alexander, D.R. Mobilization of intracellular Ca2+ by adenine nucleotides in human T-leukaemia cells: evidence for ADP-specific and P2y-purinergic receptors. Biochem. J. 304:769-774, 1994.

Apasov, S., Koshiba, M., Redegeld, F., and Sitokovsky, M.V. Role of extracellular ATP and P1 and P2 classes of purinergic receptors in T-cell development and cytotoxic T lymphocyte effector functions. Immunol. Rev. 146: 5-19, 1995.

Hedge, S.S., Mandel, D.A., Wilfird, M.R., Briand, S., Ford, A.P.D.W., and Eglen, R.M. Evidence for purinergic neurotransmission in the urinary bladder of pithed rats. Eur. J. Pharmacol. 349(1): 75-82, 1998.

Dunwiddie, T.V., Abbracchio, M.P., Bischofberger, N., Brundage, J.M., Bruell, G., Collo, G., Corsi, C., Diao, L., Kawashima, E., Jacobson, K.A., Latini, S., Lin, R.C.S., Noth, R.A., Pazzagli, M., Pedata, F., Pepen, G.C., Proctor, W.R., Rassendren, F., Surprenant, A., and Cattabeni, F. Purinoceptors in the central nervous system. Drug Dev. Res. 39(3-4): 361-370, 1996.

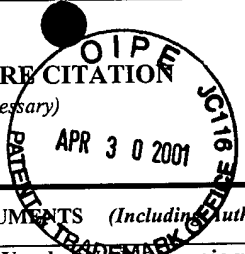
EXAMINER

DATE CONSIDERED

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Group Art Unit

1634

*EXAMINER
INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

27. Burnstock, G., and Wood, J.N. Purinergic receptors: Their role in nociception and primary afferent neurotransmission. Curr. Opinion in Neurobiol. 6(4): 526-532, 1996.

28. Von Kugelgen, I. Purinoceptors modulating the release of noradrenaline. J. Autonomic. Pharmacol. 14(1): 11-12, 1994.

29. Beaudoin, A.R.; Sévigny, J.; Picher, M. ATP diphosphohydrolases, apyrases and nucleotide phosphohydrolases: biochemical properties and functions. In: Biomembrane, vol. 5; Lee, A.G., Ed.; Greenwich, CT: JAI, pp. 369-401, 1996.

30. Beaudoin, A.R.; Grondin, G.; Enjyoji, K.; Robson, S.C.; Sévigny, J.; Fischer, B.; Gendron, F.-P. Physiological role of NTPDases (ATP diphosphohydrolases) in mammals. Proceeding of the 2nd International Workshop on ecto-ATPase and related nucleotidases. Diepenbeek, Belgium, 14-18 June 1999. Vanduffel L., and Lemmens R., Eds. Shaker Publishing B.V., The Netherlands; pp. 125-135, 2000.

31. Plesner, L. Ecto-ATPases: identities and functions. Int. Rev. Cytol. 158: 141-214, 1995.

32. Vlajkovic, S.M.; Thorne, P.R.; Hously, G.D.; Munoz, D.J.B.; Kendrick, I.S. Ecto-nucleotidases terminate purinergic signalling in the cochlear endolymphatic compartment. Neuroreport 9: 1559-1565, 1998.

33. Zimmermann, H. 5'-Nucleotidase: molecular structure and functional aspects. Biochem. J. 285: 345-365, 1992.

34. Laliberté, J.F., and Beaudoin A.R. Sequential hydrolysis of the gamma- and beta-phosphate groups of ATP by the ATP diphosphohydrolase from pig pancreas. Biochim. Biophys. Acta. 742(1):9-15, 1983.

35. Côté Y.P., Pavate C. and Beaudoin A.R. The control of nucleotides in blood vessels: Role of the ATP diphosphohydrolase (apyrase). Curr. Top. Pharmacol. 1: 83-92, 1992.

36. Sévigny J., Levesque F.R., Grondin G. and Beaudoin A.R. Purification of the blood vessel ATP diphosphohydrolase, identification and localization by immunological techniques. Biochim. Biophys. Acta 1334: 73-88, 1997.

37. LeBel D., Poirier G.G. Phaneuf, S. St-Jean P., Laliberté J.-F. and Beaudoin A.R. Characterization and purification of a calcium sensitive ATP diphosphohydrolase from the pig pancreas. J. Biol. Chem. 255: 1227-1233, 1980.

38. Sévigny, J.; Côté, Y.P.; Beaudoin, A.R. Purification of pancreas type I ATP diphosphohydrolase and identification by affinity labelling with 5'-p-fluorosulfonyl benzoyl adenosine ATP analog. Biochem. J. 312: 351-356, 1997.

EXAMINER

B. J. Lison

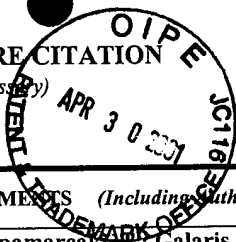
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Filing Date

June 9, 2000

Group Art Unit

11034

*EXAMINER
INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

39.

Christoforidis, S.; Papamarcaki, T.; Galaris, D.; Kellner, R.; Tsolas, O. Purification and properties of human placental ATP diphosphohydrolase. Eur. J. Biochem. 234: 66-74, 1995.

40.

Kaczmarek, E.; Koziack, K.; Sévigny, J.; Siegel, J.B.; Anrather, J.; Beaudoin, A.R.; Bach, F.H.; Robson, S.C. Identification and characterization of CD39/vascular ATP diphosphohydrolase. J. Biol. Chem. 271: 33116-33122, 1996.

42.

Maliszewski, C.R.; Delespesse, G.L.; Schoenborn, M.A.; Armitage, R.J.; Fanslow, W.C.; Nakajima, T.; Baker, E.; Sutherland, G.R.; Poindexter, K.; Birks, C.; Alpert, A.; Friend, D.; Gimpel, S.D.; Gayle III, R.B. The CD39 lymphoid cell activation antigen: Molecular cloning and structural characterization. J. Immunol. 153: 3574-3583, 1994.

43.

Wang, T.F.; Guidotti, G. CD39 is an ecto-(Ca²⁺, Mg²⁺)-ATPase. J. Biol. Chem. 271: 9898-9901, 1996.

44.

Barcellos, C.K. Schetinger MR. Battastini AM. Silva LB. Dias RD. Sarkis JJ. Inhibitory effect of cadmium acetate on synaptosomal ATP diphosphohydrolase (EC 3.6.1.5; ATPase) from adult rat cerebral cortex. Br. J. Med and Biol. Res. 27(5): 1111-1115, 1994.

45.

Côté, Y.P., Ouellet, S., and Beaudoin, A.R. Kinetic properties of type-II ATP diphosphohydrolase from the tunica media of the bovine aorta. Biochim. Biophys. Acta 1160(3): 246-250, 1992.

46.

Picher, M.; Sévigny, J.; D'Orléans-Juste, P.; Beaudoin, A.R. Hydrolysis of P₂-purinoceptor agonists by a purified ectonucleotidase from the bovine aorta, the ATP diphosphohydrolase. Biochem. Pharmacol. 51: 1453-1460, 1996.

47.

Westfall, T.D., Kennedy, C., and Sneddon, P. The ecto-ATPase inhibitors ARL 67156 enhance parasympathetic neurotransmission in the guinea-pig urinary bladder. Eur. J. Pharmacol. 329(2-3): 169-173, 1997.

48.

Crack, B.E., Pollard, C.E., Beukers, M.W., Roberts, S.M., Hunt, S.F., Ingall, A.H., McKechnie, K.C., Ijzerman, A.P., and Leff, P. Pharmacological and biochemical analysis of FPL 67156, a novel, selective inhibitor of ecto-ATPase. Br. J. Pharmacol. 114(2): 475-481, 1995.

49.

Chen, B.C., Lee, C.M., and Lin W.W. Inhibition of ecto-ATPase by PPADS, suramin and reactive blue in endothelial cells, C-6 glioma cells and raw 264.7 macrophages. Br. J. Pharmacol. 119(8): 1628-1634, 1996.

50.

Kennedy, C., Westfall, T.D., and Sneddon, P. Modulation of purinergic neurotransmission by ecto-ATPase. Sem. Neurosci. 8(4): 195-199, 1996.

Fischer, B.; Chulkin, A.; Boyer, J.L.; Harden, K.T.; Gendron, F.-P.; Beaudoin, A.R.; Chapal, J.; Hillaire-Buys, D.; Petit, P. 2-thioether-5'-O-(1-thiotriphosphate) adenine derivatives as new insulin secretagogues acting through P₂Y-receptors. J. Med. Chem. 42: 3636-3646, 1999.

EXAMINER

B. L. Lison

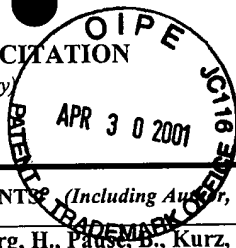
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Group Art Unit

1634

*EXAMINER
INITIAL

OTHER DOCUMENTS (Including Abstract, Title, Date, Pertinent Pages, Etc.)

RECEIVED
MAY 03 2001

51.

Bültmann, R., Wittenburg, H., Pause, B., Kurz, G., Nickel, P., and Starke, K. P2-purinoceptors antagonists: III. Blockade of P2-purinoceptor subtypes and ecto-nucleotidases by compounds related to suramin. Naunyn-Schmiedeberg's Arch. Pharmacol. 354: 498-504, 1996.

52.

Tuluc, F., Bültmann, R., Glänzel, M., Wilhelm Frahm, A., and Starke, K. P2-receptor antagonists: IV. Blockade of P2 receptor subtypes and ecto-nucleotidases by compounds related to reactive blue 2. Naunyn-Schmiedeberg's Arch. Pharmacol. 357: 111-120, 1998.

54.

Bültmann, R., and Starke, K. Reactive red 2: a P2Y-selective purinoceptor antagonist and an inhibitor of ecto-nucleotidase. Naunyn-Schmiedeberg's Arch. Pharmacol. 352: 477-482, 1995.

55.

Wittenburg, H., Bültmann, R., Pause, B., Ganter, C., Kurz, G., and Starke, K. P2-purinoceptor antagonists: II. Blockade of P2-purinoceptor subtypes and ecto-nucleotidases by compounds related to Evans Blue and trypan blue. Naunyn-Schmiedeberg's Arch. Pharmacol. 354: 491-497, 1996.

56.

Bültmann, R., Pause, B., Wittenburg, H., Kurz, G., and Starke, K. P2-purinoceptor antagonists: I. Blockade of P2-purinoceptor subtypes and ecto-nucleotidases by small aromatic isothiocyanato-sulphonates. Naunyn-Schmiedeberg's Arch. Pharmacol. 354: 481-490, 1996.

57.

Bonan, C.D., Battastini, A.M.O., Schetinger, M.R.C., Moreira, C.M., Frassetto, S.S., Dias, R.D., and Sarkis, J.J.F. Effects of 9-amino-1,2,3,4-tetrahydroacridine (THA) on ATP diphosphohdrolase (EC 3.6.1.5) and 5' nucleotidases (EC 3.1.3.5) from rat brain synaptosomes. Gen. Pharmac. 28(5): 761-766, 1997.

58.

Gendron F.-P., Halbfinger E., Fischer B., D'Orleans-Juste P., Duval M. and Beaudoin, A. R. Novel ATP diphosphhydrolase inhibitors: Synthesis, biochemical and pharmacological characterization. J. Med. Chem., 2000. (in press).

59.

Fischer, B.; Boyer, J.L.; Hoyle, C.H.; Ziganshin, A.U.; Brizzolara, A.L.; Knight, G.E.; Zimmet, J.; Burnstock, G.; Harden, T.K.; Jacobson, K.A. Identification of potent, selective P2Y-purinoceptor agonists: structure-activity relationships for 2-thioether derivatives of adenosine 5'-triphosphate. J. Med. Chem. 36: 3937-3946, 1993.

60.

Baykov A.A., Evtushenko O.A. and Avaev S.M. Malachite green procedure for orthophosphate determination and its use in alkaline phosphatase-based enzyme immunoassay. Anal. Biochem. 171: 266-270, 1988.

61.

Bradford M.M. A rapid and sensitive method for the quantification of microgram quantities of protein utilising the principle of protein-dye binding. Anal. Biochem. 72: 248-254, 1976.

62.

Berthiaume, N.; Claing, A.; Regoli, D.; Warner, T.D.; D'Orléans-Juste, P. Charaterization of receptors for kinins and neurokinins in the arterial and venous mesenteric vasculatures of the guinea-pig. Br. J. Pharmacol. 115: 1319-1325, 1995.

Halbfinger, E.; Major, D.T.; Ritzmann, M.; Ubl, J.; Reiser, G.; Boyer, J.L.; Harden, K.T.; Fischer, B. Molecular recognition of modified adenine nucleotides by the P2Y1-receptor. Part I. A synthetic, biochemical, and NMR approach. J. Med. Chem. 42: 5325-5337, 1999.

EXAMINER

B. L. Linn

DATE CONSIDERED

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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.